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Hearing to examine the challenges currently facing community recycling programs and the potential solutions to these challenges

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Chairman Barrasso, Ranking Member Carper, and Members of the Committee, I am Nina Bellucci Butler, CEO of MORE Recycling, a business of Stina Inc.

We as a nation are at a great inflection point. You have an opportunity to deploy meaningful policy solutions for communities across this great nation struggling on so many levels right now. It is time to unlock economic drivers to manage resources sustainably. Until we establish policy that places the cost and benefit of a healthy environment on the balance sheets of companies and countries, we risk further erosion of the recycling infrastructure and by extension the environment on which our children's lives depend.

My company is a mission-based company that strives to harmonize human behavior with the natural world. For more than 20 years we have honed our science-based approach to quantify material flows throughout the recycling value chain, with a particular focus on plastics and their role in environmental sustainability.

We have worked closely with the plastics and recycling industries on programs and tools to support plastic recycling as well as quantify the pounds of plastic recovered for recycling. Organizations from petrochemical companies to the EPA use the data we collect. The EPA uses the data to help measure and determine progress toward sustainable materials management, as well as to calculate recycling rates. In short, we understand recycling. We know the missing economic drivers needed to tackle the plastic waste problem.

Given our expertise and vision, we are asked to speak at global events such as the World Petrochemical Conference and the Global Plastics Summit. We understand the economic barriers facing companies attempting to pivot towards a circular system. I have interviewed dozens of CEOs, policy makers, and agency leads who have all come to terms with the fact that policy of significant proportions is needed. More and more companies throughout the value chain are seeking ways to end plastic waste and reduce greenhouse gas emissions (GHG). Economic, social, and health risks directly influence the health of our environment. We are currently allowing waste and GHG emissions to add costs to communities that they cannot shoulder and to threaten life on this most precious blue planet.

We need the leadership and cooperation to unleash human ingenuity to design, implement, track, and optimize a sustainable resource management plan, our "North Star." There are no silver bullet solutions to our waste and climate challenges, only a central guiding principle; we must transition from a linear to circular economy with value on carbon. A circular economy, according to the Ellen MacArthur

Foundation, is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems. The linear model is one of take-make-waste.

Plastics are a paradox. They do benefit society. They are light, resulting in dramatic fuel savings, and they provide protection for much of the food our growing population depends on. However, plastics present enormous environmental challenges. Plastic scrap exists literally everywhere from the Mariana Trench to the Great Pyrenees. It is simply unethical to make something nature cannot absorb and not provide a system to manage it. The financial burden on local governments of managing our waste has become too much to bear.

We have to come to terms with the socio-economic realities related to eliminating waste and getting recycled plastics back into the economy. A circular economy offers a solution to plastic waste by creating incentives to reabsorb carbon used, or scrap plastic, back into the economy. Every petrochemical company I work with is facing economic barriers in their pivot towards a circular system. This is why action is necessary to unlock the plastic paradox. I know we have the minds, technology and creativity to do it. We just need the will. It is an honor to appear before you all today to share my expertise on recycling and more efficient, mindful use of resources.

UNLOCKING THE PLASTIC PARADOX

If we eliminate plastic in critical applications, without radical shifts in our consumption patterns, we will create more demand for oil and gas and generate more GHG emissions, further exacerbating climate change; this is the plastic paradox. The United Nations Food and Agriculture Organization says 30 percent of food is wasted globally; food waste adds eight percent of total global GHG emissions. And, we consume 10 percent of the U.S. energy budget just shipping food, so it behooves us to ship with the lightest material that protects the product, to ensure it becomes nourishment rather than waste. Grapes packaged in a perforated film bag can reduce in-store waste of grapes by 20 percent as compared to selling them loose.

Almost half of all plastic production is for packaging; the trend is toward lighter packaging to reduce energy consumption and GHG emissions. Unfortunately, these highly engineered film packages along with many other ubiquitous plastic items are not yet recyclable within our system. The other half of plastic produced has given us supernatural capabilities—flying, diving, skiing, clear eyesight, receiving a new heart or joint, talking to and seeing someone thousands of miles away. Many of these plastic applications are not designed for recycling and will require alternative methods to fully capture the value of the materials after their usefulness ends. We must take action to support economic policy to balance our environmental debt sitting on the shoulders of future generations and those most at risk. Switching to a reusable water bottle or not using a straw are good steps, but for real progress we need economic reforms that reward innovators for efficiency that can scale to the scope of the problem.

The Plastic Paradox

- Oil and gas producers make money primarily through fuel production and secondarily through plastics production
- Use of plastics results in lighter products requiring less fuel use
- Energy and petrochemical companies are looking to plastics to drive the demand for oil and gas
- The plastics waste problem threatens the “social license” of the producers and whole ecosystems
- Yet, plastics packaging and products are responsible for lowering carbon impacts of society’s very wide carbon footprint: from products we move around the globe, to the supernatural capabilities we gain with plastics

Valuing carbon at all stages of the plastics life cycle is the key to unlocking the plastic paradox. The marketplace for these various stages, currently, is riddled with unknowns that hinder leaders and innovative companies from turning waste into a resource. Valuing carbon creates transparency. If plastic has value across its entire life cycle it is less likely to become waste. A North Star policy would create value for carbon and encourage the shift from a linear to circular economy.

GROWING DISPARITY & MIS-ALIGNED ECONOMIC DRIVERS

It is imperative that we look at the problem and unlock this paradox holistically. How can we balance the environmental debt of the plastic waste with our current tools and keep up with the problems that compound each year? The gap between new plastic produced and plastic recovered is widening and the recycling rates are trending downward from already failing grade levels. The amount of plastic waste and its contribution to GHG emissions is a problem of epic proportions that is growing by the minute. Each minute we dump the equivalent of a dumpster truck of plastic in the ocean. Plastic recycling is a trickle compared to a tsunami of new plastic production. With today's lifestyle in which we can get what we want, when we want it, from wherever, it is clear we know how to produce and distribute products; and, therefore we surely have the skill sets to design elegant reverse logistics to recapture used products. It is not a moonshot. We just need economic drivers in the right place.

We waste a lot of plastic because it is "cheap" relative to the costs externalized to those downstream from production or near landfills. If we could see and feel the true costs of extraction, production, and waste we would innovate to create more efficiency and conserve our oil, gas, metals, trees, soil, etc. for future generations. Citizens, or their lack of recycling education, are not the problem. Yes, continuous education and outreach to citizens regarding how to recycle, and what can and cannot be recycled, should be a part of citizen education, but education alone will not be enough to solve our growing waste problem. Neither will one-time infusions of capital. Policies to reduce, reuse and recycle must be grounded on the basic principles of economics that guide our behavior.

Upstream material extraction is heavily subsidized in the U.S. and globally, and landfill costs are artificially low because their environmental costs are not considered. The recycling industry finds itself in an unsustainable middle ground, without solid, long-term demand for scrap plastics. As we continue to subsidize extraction to stimulate the American economy and create energy independence, while externalizing environmental costs, we provide disincentives for businesses or citizens to reduce waste and recycle to protect our most critical resources. Low recycling rates are not just because citizens do not recycle right. Our system is not structured to send consistent market signals to packaging and product designers required to promote a circular economy—from operations through to product and end of life management. The costs of plastic clogging water ways or littering beaches are not on producers' balance sheets, which hinders the incentive for producers to solve the plastic waste problem. It is currently twice as expensive to use recycled plastic in place of virgin in common packaging applications. There is virtually no economic incentive to use recycled plastic even though recycled plastic can cut energy consumption by 88 percent. Also, important to note when evaluating the cost benefit of solutions is the fact that a product's environmental impact is born mostly in extraction, production and shipment— before citizens like you or I decide what to do with our product or package at its end of life. There is a huge opportunity to stimulate innovation if we had a North Star guiding us.

How can we focus more on efficiency, performance and innovation rather than measuring our success based on consumption and output? How do we think about which product or action has the lowest carbon footprint and design policy that drives us towards our North Star? I was once under the illusion that if we could just set up the best recycling program, we would control the unbridled generation of

waste through support mostly by the private sector. That was before the shale gas revolution began to impact markets and recycling efforts on a large scale. Even if we are wildly successful in educating citizens to recycle, we lack the recycling capacity to absorb scrap plastic, as well as other non-plastic recyclables. The investment community does not see the return on investment for expansion of material recovery facility sorting capabilities, secondary sorting facilities, or recycling capacity. Currently, for a major category of plastics we only have the capacity to recycle five percent of the material produced by only the top 10 virgin resin producers of polyolefins. It simply costs more to use recycled plastic than virgin plastic. Publicly traded companies with commitments to use recycled content are hamstrung with their fiduciary responsibility to reduce costs. Today this is further complicated by a severe recession and the tragedy of COVID 19.

HOLISTIC SOLUTIONS

Banning plastics is not always a viable strategy, but we cannot continue to litter our world with them. Let us embrace responsible handling, starting with using less, reusing more, getting our chosen material into the appropriate bin, and buying products that contain recycled content. We must find value in recycled plastic in order for it to be reabsorbed into the economy. Otherwise, we fall short in truly achieving sustainable materials management.

Finding solutions for our own scrap materials is an essential step in curbing the global plastic marine crisis. Many have blamed China for the market challenges impacting recycling. When China needed raw materials, it made sense for China to source our scrap. That demand for scrap enabled us to forgo necessary investments in our recycling infrastructure. China no longer wants or needs it, and now we are ill prepared to absorb much of what is being produced. We need to align value chains so that those who produce materials are also creating demand for recycled materials. Our supply and demand for recycled plastic is extremely out of balance.

POLICY LEVERS: SHORT-TERM AND LONG-TERM

There is a path forward where a strong economy is not mutually exclusive from a healthy environment. Movement toward a more circular economy is anchored in the need to balance economic, environmental and social impacts. Other regions of the world are retooling and reengineering for the 21st Century in which efficiency is key. The American people need a North Star Policy especially now – setting our highest objective on sustainable materials management that will require a dedicated work force and innovation.

Tested policies like extended producer responsibility with eco-modulated fees and recycled content mandates can create the funding mechanisms necessary for the system to attract more investment and optimization. Our current “policy” of externalizing costs and subsidizing extraction of raw materials rather than recovering what already exists is completely counter to what is required to stem the tide of waste and GHG emissions. Markets are responding exactly as expected when the economic system is structured to incentivize waste.

In addition to these longer-term systemic policy levers there are a handful of short-term tools we know to be effective, for example:

- Enact bottle deposit legislation based on most cost-effective programs;
- Enact recycled content legislation on high volume, low barrier products (e.g., trash bags);

- Tax on disposal (a "7th Generation Fee");
- Enforcement of pollution prevention practices (e.g., EPA's P2 program);
- Implementation of the EPA Office of Research Development Municipal Solid Waste Decision Support Tool that provide a holistic evaluation of the life-cycle environmental tradeoffs and economics to help us transition to circular economy; and
- Establish methodology and verification of claims of recycled content.

These policy mechanisms provide directional support for a circular economy. Many businesses benefit from material generated in the few states with bottle deposit programs and minimum content legislation. Expansion of such policies with established methodology for reporting and measurement would have a significant and sustainable impact. Instead of depending on the companies with voluntary commitments we could level the playing field and eliminate the free riders. National policies could also help to rationalize where our new infrastructure is built so we can reduce cost and environmental impacts of transporting recovered materials to recycling markets.

To power the engine of a circular economy and reduce the burden of waste on local governments, however, we need "extended producer responsibility" (EPR). EPR is a way to engage all players within a packaging value chain to support not only the collection and sortation of post-use materials (including the necessary financing), but also to support the design of packaging/products with a lighter environmental footprint through the use of eco-modulated fees. These fees, set on the specific types of packaging would motivate companies to employ more efficient design, as well as recycled content. Subsequently, this also exposes the need to coalesce around a nationally agreed upon methodology to validate recycled content and associated claims. Communities are facing severe budget constraints, therefore, would dramatically benefit from EPR.

The answers to the challenges before us are not simple. They require the adoption of many policy and technological tools. And, as I work with petrochemical companies and consumer packaged goods companies in a global marketplace, I often hear pleas for the U.S. to establish policy to guide sustainable innovation. Such policies would provide competitive advantages to those companies that design for recyclability and lowest overall environmental impact for their products and packaging. Smart economic policy could provide the opportunity for petrochemical companies to invest in solutions. There are many examples of companies in other parts of the world that are investing in technology that enables them to competitively use recycled materials.

Most major sustainability innovations have been the result of investment from the private and public sectors. A North Star policy that creates value for carbon *and* waste will provide incentives for investment in the circular economy.

Thank you for the opportunity to present before the Committee today.